

NorthMet Mining Project and Land Exchange

Preliminary FEIS Extended Comment Form

Agency: GLIFWC

Comment #: _____

Comment:

Reliance on Adaptive Management in lieu of Scientific Analysis

In comments provided for the 2009 DEIS GLIFWC staff state:

“GLIFWC staff object to the way in which monitoring is used in this DEIS. As previously stated, the DEIS does not include vital information needed for impact characterization. Instead, the DEIS proposed to substitute monitoring of the project for an analysis that can be included in the DEIS. For example, the complete extent of indirect wetland impacts has not been determined. The DEIS acknowledges that some indirect wetland impacts will occur in addition to those impact identified in the document. The DEIS states that a wetland monitoring system will be used to detect impacts after the project is underway. This method is not acceptable to GLIFWC and does not meet the intent of NEPA.”

The issue described in the comment above has not been resolved. The PFEIS has adopted the term “adaptive management” to describe monitoring and potential future mitigation actions that would be implemented on an as needed basis. As we have repeatedly stated, monitoring does not prevent mine related environmental impacts. Monitoring can only detect impacts after they have begun to occur and the adaptive management activities that are listed in the PFEIS would only be a reaction to an impact that has begun to occur.

A federal EIS document is not reactive but forward looking. The purpose of an EIS is to identify all reasonably foreseeable impacts and scientifically characterize them so that decision makers can evaluate the cost and benefits of a proposed action. The EIS does have the additional purpose of identifying mitigation and monitoring activities but this task does not mean that prior characterization of impacts is unnecessary. The PFEIS has failed to adequately define the

impacts (costs) of the proposed PolyMet project in several critical areas. Therefore, decision makers will not have the information they need to make informed decisions.

Adaptive management is improperly used in place of impact prediction in many areas of the PFEIS including geotechnical stability of the tailings facilities (PFEIS page 5-618), cumulative effects analysis (ES-44), water treatment facilities (PFEIS page 3-8), wetland restoration (PFEIS page 5-378), mercury reduction (PFEIS page 5-224), etc. Two important examples are expanded upon below.

1. Indirect Wetland Impacts

The approach used in the analysis of indirect wetland impacts in the PFEIS is different from the 2009 DEIS and the 2014 SDEIS. GLIFWC staff commented in the past that the 2009/2014 analog approach was overly simplistic. The new approach in the current PFEIS appears to be one of doing no analysis at all but relying on adaptive management. The PFEIS states:

“Indirect effect analyses performed for the EIS were not performed to characterize impacts but were done to inform where monitoring should take place for those areas that were identified as having a potential for indirect wetland effects.” (PFEIS page 5-253 line 183)

The 2009/2014 analog approach was previously chosen by the lead agencies because they contended that a more quantitative method based on MODFLOW groundwater modeling and field collected data would not yield information useful to assess indirect impacts. This contention is wrong. A site specific MODFLOW model that incorporates existing information could provide reasonable estimates of the potentiometric surface (water table). The model could then be stressed by incorporating the proposed PolyMet mine pits and the neighboring Northshore mine pits and reasonable estimates of drawdown under the wetlands could be developed. The development of this model, including field data collection to support it, would have been accomplished in far less than the 8 years the EIS process for this project has lasted. Groundwater models, using the MODFLOW software, are standard techniques for assessing groundwater impacts of proposed mines at newly proposed projects across the country. Statements in the PFEIS regarding the complexity of the site and the impossibility of successfully modeling water table drawdown cannot be supported.

GLIFWC staff object to further simplification of the indirect wetland impact analysis. This approach relies on monitoring that by definition would detect impacts after they have already begun to occur. Only then would adaptive management techniques be used to attempt to mitigate the damage. This approach is contrary to the goals of the NEPA process which is designed to be forward looking.

2. Mine Site Groundwater Movement

According to the co-lead agency memo of June 22, it is not possible to rule out a northward bedrock flowpath from the proposed NorthMet pits to the Northshore pits during the closure period and beyond (MODFLOW Teleconference of July 2015 and Draft Interagency Memorandum: Co-Lead Agencies' Consideration of Possible Mine Site Bedrock Flowpath, June 22, 2015). The results of both complex (MODFLOW) and simplistic (ERM's MathCad) modeling of flow direction indicate that there will in fact be a northward flowpath. The existence of a bedrock groundwater mound that would prevent a northward flowpath, is not plausible given the hydrogeology of the site. Adaptive management cannot be a substitute for understanding the hydrology of a northward flowpath through the development of an analytical model based on site data and a consistent conceptual model. Such an understanding would provide critical information on contaminant flow paths and travel times of contaminants to the north as well as to the Partridge River. The current proposal to have a system of monitoring wells that could detect contaminants moving out of the mine pits is appropriate, but is not a substitute for understanding the scope of potential impacts. Only with an understanding of the site hydrology and the potential impacts can the feasibility of mitigation measures be evaluated.

GLIFWC staff object to this adaptive management approach. A defensible, site specific groundwater model, based on a consistent conceptualization of the site hydrology should be used to characterize site hydrology, understand the effects of the PolyMet project and its interactions with adjacent projects and define contaminant flows.